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YATES'

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U. S. Department of Agriculture

AUTUMN LIST OF FARM SEEDS

SEASON 1927.



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More Cultivation More Fodder More Profit.

THE present is a very favourable time for laying down improved Pastures, Lucerne and other permanent crops and for increasing the area under Cultivation on the Farm. We feel convinced that throughout our coastal and tableland districts, which usually have a good and fairly regular rainfall, every additional acre put under cultivation will yield additional profit to the Farmer, and this applies particularly to those engaged in the great Dairying Industries, as it is only by intense cultivation that the maximum returns will be obtained.

We trust this Catalogue will be of assistance when deciding on the cropping to be undertaken and we shall be glad to give on request any further information at our disposal.

For all prices, see our Current Price List of Farm Seeds (post free).

Arthur Yates & Co. Ltd.

For all Farm Seeds.

Yates' Re-Cleaned and Tested Farm Seeds

CONDITIONS OF SALE AND WARRANTY.

We believe that all Seeds, Bulbs, and Roots sold by us are of the description and kind specified by us at the time of sale, but owing to the practical impossibility in many cases of being certain of this, we give no undertaking that such Seeds, Bulbs, or Roots will correspond with the description under which they are sold, and we make all sales subject to this condition. We further give no warranty, expressed or implied, as to their growth, description, quality, or productiveness and will not be in any way responsible for the crop. If the purchaser does not accept the goods sold to him on these terms they are at once to be returned to us, and any money paid to us will be refunded. **ARTHUR YATES & Co. Ltd.**

PRICES.—We do not print prices in this Descriptive Catalogue as values fluctuate and some of our supplies have not been received into store at time of going to press. All charges are set out in our Current Price List of Farm Seeds at time of booking order unless specially quoted otherwise. The Price List now current is sent you herewith, and later issues will be posted promptly on receipt of enquiry.

DELIVERY.—We deliver Seeds on rail or wharf Sydney, after which Seeds are on customer's account and at his risk. Orders sent by goods train are consigned carriage forward (except to unattended platforms), unless we are otherwise instructed at time of order. Delivery within the Suburban area of Sydney will be made of Farm Seeds, Seed Potatoes, Manures, and Garden Sundries, at the following charges:—6d. for 14 lbs., 9d. for 28 lbs., 1s. for 56 lbs., 2s. per cwt.

FORWARDING INSTRUCTIONS.—Please give full and careful directions with each order and we will do our utmost to comply with them. When no instructions are received we send according to our judgment.

YATES' FARM CALENDAR

Approximate times for sowing are denoted by

† for moderately warm climates where Oranges thrive.

* for cool climates, say where English Fruits thrive.

The most suitable times for sowing are very largely influenced by local conditions and seasons, and these and any local experience available should always be taken into consideration.

Farm Seeds	Jan.	Feb.	Mch.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Farm Seeds	Jan.	Feb.	Mch.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Artichoke, Jerusalem	...	...	...	...	...	†	†	†	...	...	...	...	Peas, Field for Fodder	...	...	†	†	†	†	†	†	†	†	...	
Barley, English	...	†	†	†	†	†	†	...	...	...	...	...	„ „ „ Soiling	...	†	†	†	†	†	†	†	†	†	...	
Barley, other sorts	...	†	†	†	†	†	†	...	...	...	...	...	Peas, for Garden	...	†	†	†	†	†	†	†	†	†	...	
Beet, Sugar	...	...	...	...	...	...	...	...	†	†	†	...	„ for Market	...	†	†	†	†	†	†	†	†	†	...	
Beet, Silver (Field)	...	...	†	†	†	...	...	†	†	†	†	...	Pumpkins	...	...	...	...	...	...	...	†	†	†	...	
Buckwheat	...	...	...	...	...	...	...	†	†	†	...	...	Potatoes	...	†	†	...	...	†	†	†	†	†	...	
Canary	...	...	†	†	†	...	...	...	†	†	†	...	Rape	...	...	†	†	†	†	†	†	†	†	...	
Carrot (Field)	...	...	†	†	...	...	...	†	†	†	...	...	Rye Corn	...	†	†	†	†	†	...	...	...	...	...	
Cabbage (Cattle)	...	†	†	...	...	...	...	...	...	...	†	...	Rhodes Grass	...	†	†	†	...	...	...	...	†	†	†	
Chicory	...	...	†	†	...	...	...	...	†	†	†	...	Sainfoin	...	...	†	†	†	...	...	...	...	...	...	
Clover (Sorts)	...	...	†	†	†	†	...	...	†	†	†	...	Saltbush	...	...	†	†	†	...	†	†	†	†	...	
Couch	...	...	...	...	...	...	†	†	†	†	†	...	Shallots	...	...	†	†	†	†	...	...	...	...	...	
Cow Peas	...	...	...	...	...	...	...	†	†	†	†	...	Sheeps Burnet	...	...	†	†	†	†	...	†	†	...	...	
Grasses, Pasture	...	...	†	†	†	†	...	...	...	...	...	...	Sorghums & Millets—	...	...	...	...	...	...	...	...	...	...	...	
Kale, Thousand Headed	...	†	†	†	...	...	...	...	...	...	...	...	Fodder Varieties	...	†	†	†	...	...	...	†	†	†	†	
Kale, Chou Moeller	...	†	†	†	...	...	...	...	...	...	...	...	Millet, Broom	...	...	...	...	...	...	...	†	†	†	...	
Linseed (Flax)	...	...	...	...	†	†	†	†	...	...	...	...	Grain Sorghums	...	...	...	...	...	...	...	†	†	†	...	
Lucerne	...	...	†	†	†	†	†	†	†	†	...	...	Soy Beans	...	†	...	...	...	...	...	†	†	†	†	
Lupins	...	...	†	†	†	†	†	†	†	†	†	...	Sudan Grass	...	...	...	...	...	...	...	†	†	†	†	
Maize, for Grain	...	...	...	...	...	...	...	†	†	†	†	...	Sunflower	...	...	...	...	...	...	...	†	†	†	...	
Maize, for Fodder	...	†	†	†	...	...	...	†	†	†	†	...	Swede	...	†	†	†	...	...	...	...	...	...	...	
Mangel	...	...	†	†	...	...	...	...	†	†	†	...	Tagosaste	...	...	†	†	†	†	...	†	†	†	...	
Mangel, Half Sugar	...	...	†	†	...	...	...	...	†	†	†	...	Tares	...	...	†	†	†	†	†	†	†	†	...	
Millet (See Sorghum)	...	...	...	...	...	...	...	...	†	†	...	...	Tobacco	...	...	...	...	...	...	†	†	...	...	...	
Mustard	...	...	†	†	†	...	†	†	†	...	...	...	Turnip (Field)	...	...	†	†	†	†	...	...	...	...	...	
Melon, Cattle	...	...	...	...	...	...	...	†	†	...	...	...	Velvet Beans	...	...	...	...	...	...	...	†	†	†	†	
Oats, for Fodder	...	†	†	†	†	†	†	†	†	...	...	...	Wallaby Grass	...	...	...	...	...	...	...	...	...	...	...	
Oats, for Grain and Hay	...	†	†	†	†	†	†	†	†	...	...	...	(Danthonia)	...	...	†	†	†	...	†	†	...	...	...	
Paspalum	...	†	†	†	...	...	...	†	†	†	†	...	Wheat, for Fodder	...	...	†	†	†	...	†	†	...	...	...	
Peanuts	...	...	...	...	...	...	...	†	†	†	...	...	Wheat, for Grain	...	...	†	†	†	†	...	...	...	...	...	

NATIVE GRASSES

AUSTRALIA'S GREAT HERITAGE

OVER the greater part of our continent climatic conditions are too severe for the successful sowing of introduced grasses. Over that vast area called the Inland Plains the Native Grasses reign supreme because of their amazing hardiness and drought resistance. In addition, our indigenous forage plants are famous for their grazing qualities, in as much as they produce the finest and best wool in the world. The main and most important species of Australian grasses are:—**PANICUM** (the Panic Grasses), **ASTREBLA** (Mitchell Grasses), **ANDROPOGON** (the Blue Grasses), and various **ERIANTHUS** species. The former are the dominant species in the summer rainfall region of Northern Australia, while the following predominate in the Southern half, where the main rains fall during the winter:—**DANTHONIA** (Wallaby Grasses), **AGROSTIS** (Bent Grasses), **ANTHISTIRIA** (Kangaroo Grasses), **STIPA** (the Spear Grasses), **ERAGROSTIS** and **POA**.

The purpose of these descriptions is to maintain and if possible increase an interest in native grasses but it must be understood that supplies are exceedingly irregular. We usually have in stock Wallaby Grass and at intervals Mitchell Grass and Australian Blue Grass while of the others mentioned above seed is practically unobtainable. Those interested should write for particulars of varieties available.

WALLABY GRASS

(*Danthonia*)

One of the hardiest of our native grasses. Grows in a wide variety of soils and climates. Especially adapted to the poorer soils unsuited to other grasses, splendid for sheep.

Mr. F. Turner in his work, "Australian Grasses," says of this variety.—"It grows both in the coastal districts and in the arid interior; it is one of the most nutritious grasses of Australia, and, unlike most other species of this genus, it will grow more or less all the year round. Stock of all descriptions are remarkably fond of it. The seed germinates readily after showery weather in the autumn and spring months. On good soils the roots of this grass penetrate to a great depth, which enables the plant when growing in the arid interior to withstand long spells of dry weather." The seed is very light, and a small quantity will cover a good breadth of land; we would strongly recommend that two to three pounds per acre should be added to all mixtures for any soil or climate.

MITCHELL GRASS

(*Astrebla*)

This is one of the best native grasses we have, and will yield a large amount of succulent herbage, of which stock are very fond. This grass is very nutritious, a good drought resister, and forms a permanent pasture. Requires well-drained land. Quickly responds to rainfall. If cut when it first shows the flower stem, makes excellent hay. Seed is only saved in favorable seasons and we usually offer both *Astrebla triticoides* and *Astrebla elymoides*. Sow two to three pounds per acre. No supplies this year.

AUSTRALIAN BLUE GRASS

(*Andropogon sericeus*)

This perennial grass grows well in the coastal districts and colder portions of New South Wales, Victoria and Queensland but it is also found in other parts. It is a valuable pasture grass, and, in suitable situations, makes considerable growth in the winter, making it doubly valuable to graziers and farmers. It will also yield an amount of rich, leafy, bottom herbage in the summer months, of which cattle and sheep are very fond and on which they will fatten. An excellent grass, will stand close feeding well, and will continue growing during long periods of dry weather. Sow two to three pounds per acre. No supplies this year.

COOLAH GRASS

(*Panicum prolatum*)

An erect perennial species, found more or less in most of the Australian States, generally in good situations. It makes its growth during the summer months, stands considerable hot weather, usually keeping green well into the autumn. It thus forms a valuable pasture for our coastal and inland country, though it is not recommended for the table lands owing to the severe frosts.

The department have recently been experimenting with this grass in mixed pastures with considerable success. No supplies at present.

NATIVE MILLET

(*Panicum decompositum*)

Noted for the wonderfully quick growth it makes after rain and the weight of leafage it produces in good seasons. It is considered to be a grass well worth cultivating, and it is adaptable to a wide range of soils and climates. It is very drought resistant and of perennial character but makes its growth in the warmer months. No supplies this year.

FLINDERS GRASS

(*Anthistiria membranacea*)

Flinders Grass is very nutritious and palatable and under average conditions is easily propagated by seed. It is a great fattening grass; it is good for temporary pasture and makes excellent hay, and even when the grass is matured and dried up stock like it and do well on it. It is worth trying to establish in our inland districts if not already found in the pastures. It also goes under the names of Barcoo Grass and Landsborough Grass.

ROOT PLANTING

When only limited supplies of seed are available or where it is desired to test the value of grasses, it is worth trying to establish plots for experiment and for propagation by root division (where the nature of the root system permits).

Even if only a small quantity of seed be sown it will in a rich piece of land quickly form large clumps and these can be lifted and carefully sub-divided and replanted, say six to nine inches apart, and this course can, if desired, be repeated again and again. For full and interesting information on Native Grasses we would refer readers to Mr. E. Breakwell's new book "The Grasses and Fodder Plants of N.S.W." which we can supply at 6/- (postage 4d.)

PASTURE GRASSES.

FOUR HARDY GRASSES FOR WARM CLIMATES

THESE four varieties, but especially Paspalum Dilatatum and Rhodes Grass, are very extensively used in our dairying districts, while Rhodes Grass will also succeed well in many parts of our Western Country where the elevation is not great. They should be sown in the late spring, summer or early autumn when the weather and soil conditions are favourable for germination and quick growth.

RHODES GRASS

(Chloris gayana)

A very strong growing grass, which, rooting at every joint, soon covers a large area. About the only grass that will hold its own with Paspalum. Excellent for moist situations and hot climates, but succeeds well in a large range of situations and climates, except where heavy frosts are experienced. It is quick germinating after rain and makes growth rapidly and is very palatable to all stock. When well established it is remarkably drought resistant. It is very largely used for surface sowing after clearing and burning off scrub in the coastal areas, and for this purpose there is nothing better. In all the dry inland districts of Queensland, Rhodes Grass is proving of the utmost value and has also been of great value in Western N.S.W., not only in mixed pastures but as a special grazing crop when planted with Lucerne, say four pounds of Rhodes and two or three pounds of Lucerne per acre. When sown alone, four to six pounds per acre is sufficient if good quality seed is used.



PASPALUM DILATATUM

(Yates' Prime "Hand-Shaken")

Does well planted in conjunction with Rhodes Grass. The seed should be sown during spring, summer, or early autumn, say from August to April. Succeeds best where moist warm conditions prevail, but will prove a very profitable crop even where a moderate rainfall is experienced, and under these latter conditions it is not so likely to become rank and difficult to deal with. Once introduced into swampy land, Paspalum soon covers it with a thick mat and gives good grazing where the land would otherwise be useless. It is an excellent practice to sow a few pounds of Perennial Red Clover and White Clover with the Paspalum, as these provide feed when the latter is more or less dormant. Sow ten to twelve pounds of Paspalum per acre. Special quotes for large quantities.

PASPALUM COMPRESSUM

(Also known as Durrington Grass or Carpet Paspalum)

A dwarf compact growing variety of Paspalum, proving of great value for poor sandy stretches of country where Paspalum Dilatatum does not do well; makes well matted roots, but is most suited for warm coastal climates. Sow five pounds per acre.

COUCH GRASS (Cynodon dactylon)

Stands heat and drought well and is specially suited for hot, dry districts where other grasses do not succeed. It is also of great value for binding loose soil, sand banks, etc. It should not be planted near cultivation paddocks, as it is difficult to eradicate. This grass makes very good grazing for pigs. Sow in warm weather after good rains. Sow ten pounds per acre.

In warm climates this grass is very largely used for lawns, making a close, fine turf, and withstanding considerable heat and drought. For this purpose a pound of seed is sufficient for about ten yards square.

KIKUYU GRASS (Pennisetum clandestinum)

We undoubtedly have in Kikuyu a grass of which the quality and capabilities are hardly yet realised by farmers and pastoralists. It is a native of British East Africa and is a perennial grass with a strong system of surface and underground runners. On this account it is a very quick spreading variety and also remarkably drought resistant. It is of particular value for poor clay or sandy soils where it is usually difficult to grow anything but weeds, though naturally the richer soils will give correspondingly better results.

The underground runners quickly root at the joints then send up fresh growth to a height of 1 ft. or 2 ft. or even more in rich localities.

Under coastal conditions it is the quickest growing grass we have, growth taking place continuously, except where frosts are experienced.

On the tableland country and throughout the slopes it will succeed well, and in Queensland also it is creating widespread interest. It will, we think, be

found a useful grass in many parts of Victoria, particularly where Paspalum is found.

It does not seed in Australia, therefore it can only be distributed by means of rootlets which we can supply at any time from late winter on. It is recommended to plow the land, opening up furrows six feet apart, and dropping in the rootlets about every three feet. At this rate about 2500 plants will suffice for one acre. We recommend all to try this grass which comes away earlier than Paspalum and gives such heavy yields of very high quality fodder. It adds to the value of the pasture and gives a more balanced ration if some of the clover family can also be introduced, and we suggest $\frac{1}{2}$ lb. White Clover or Subterranean Clover, and in more favoured districts Perennial Red Clover.

For prices, see Current Price List.

Approximate cost of Postage and Packing—Per 100, 1s.; per 50, 9d.

PASTURE GRASSES (Continued)

THE varieties in the following list are all grasses which have proved to have a distinct value in the temperate parts of Australia with a good average rainfall. They can be recommended for the N.S.W., coast and tablelands and for districts with similar climatic conditions in other States. Autumn is the best time for sowing these varieties, but sowings may also be made in the spring in suitable situations if the weather be favorable.

As regards Kikuyu Grass, Elephant Grass and Texas Blue Grass, these are distributed by roots or cuttings only, and these can be put out with advantage from early spring onwards.

WIMMERA RYE GRASS

(*Lolium subulatum*)

This is a comparatively new grass and is being used with great success over a large portion of the wheat area of Victoria and Southern and South-Western N.S.W. In many ways it is similar to Italian Rye Grass, the main difference being its great drought resistance. It is an annual and will provide green feed for seven to eight months in the colder part of the year, after which, although it dries off, it is very nutritious as dry hay, the seeds remaining attached to the dry straw for a long period. After the first sowing it will seed itself down every year, even though the land be cultivated for crop, and start away again with the first good autumnal rains.

We do not recommend sowing this on first-class wheat land which is regularly cropped, as it may interfere with the growth and be a little difficult to control. But on land of lighter type which requires periodical rests from cropping, or on lands which have been completely exhausted by continuous cropping, we confidently recommend it as a pasture grass of the very highest value. Sowing alone from six to fifteen pounds per acre should be used according to the district, or, if sown with the crop to provide pasturage on land which it is proposed to spell when the crop is off, as low as four pounds will probably be enough. If more is sown it may interfere with the growth of the crop. For districts with good winter rainfall a paddock of Wimmera Rye Grass and Subterranean Clover mixed makes an excellent pasture.

This grass is particularly recommended for the Southern and South-Western portions of N.S.W., and in other parts of the Commonwealth where good winter rains may be expected.

COCKSFOOT

(*Dactylis glomerata*)

This is one of our most useful introduced grasses, and with Perennial Rye Grass, Fescues and one or two others, should form the bulk of all artificial pastures in the more favoured coastal and tableland country. It is one of the hardiest of the introduced grasses, withstanding extremes of climate to a wonderful extent. It is inclined to grow tussocky, but judicious grazing and occasionally allowing it to seed itself down will counteract this. We would recommend including anything from two to eight pounds in grass mixtures.

Yates' Extra Heavy Re-machined.—This is heavy, thoroughly machine-cleaned seed, which will give a good germination and a quick and even catch.

ITALIAN RYE GRASS

(*Lolium italicum*)

This grass is only a biennial, but if not grazed too closely and is allowed to seed itself (but not until after the first year), it will last for several years. It is of great value as a hay crop sown alone; with clovers or with grain, sow up to two bushels per acre.

PERENNIAL RYE GRASS

(*Lolium perenne*)

On those parts of our coastal and tableland country, where a high and regular rainfall may be looked for, this is one of the very best of the introduced grasses, and is a specially good winter grass for the dairy farmer. In suitable localities it is practically permanent, but best results are obtained with this, as with all artificial grasses, by re-sowing at intervals of, say, five to ten years. Sow one and a half to two bushels per acre if used alone.

Yates' Extra Heavy Old Pasture.—This is a very fine perennial variety of the same type and quality as that hitherto offered as Poverty Bay Rye Grass, which was a variety originated by us many years ago. But owing to misrepresentation and substitution in connection with the use of this name, we have deemed it advisable to change to the above descriptive name. The seed offered under this brand is saved in a dry climate from true perennial type pastures and therefore more hardy and long lasting under Australian conditions than most of the perennial Rye Grass generally sold which is saved in cool wet districts. All the seed we offer is carefully tested, heavily re-machined and is of high percentage of germination and purity.

Yates' Heavy Re-Machined.—This is the next best long lasting strain and is superior in this respect and in weight of seed to a great deal of the Rye Grass offered.

Yates' Extra Heavy Re-machined Italian.—This is a first-class strain, thoroughly re-cleaned, of the ordinary Italian, and has given excellent results wherever grown.

Westerwoldicum Re-machined.—This is a giant variety of Italian Rye Grass, and is earlier and more vigorous. Very hardy.

PRAIRIE GRASS

(*Bromus unioloides*)

This is a most valuable grass, particularly for the dairyman. It gives wonderful yields of fodder in suitable country, and cows milk splendidly on it. It is a first-class pasture grass, and also makes excellent hay. Owing to its palatability, all stock are very fond of it, and as it will not stand continuous heavy grazing, it should be spelled regularly; this is well worth while owing to the extra yields thereby obtained. It grows luxuriantly during the winter, providing feed when badly needed. It grows to best advantage in rather loose, rich soils. Sow twenty to forty pounds per acre if used alone. When used in mixtures, use one to three pounds per acre.

Yates' Finest Bright Re-machined.—A heavy grade plump seed of a very high percentage of germination and purity.

PASTURE GRASSES (Continued)

PHALARIS BULBOSA

Owing to the dry spring in the seed-saving districts no supplies of undoubtedly genuine seed are available at time of issue of this list.

Each year Phalaris Bulbosa is required in greater quantity as its merits become better known to farmers and graziers. It is considered by many to be a superior grass, for our conditions, to Rye Grass and Cocksfoot. It has a particular value in its ability to withstand hard, cold conditions; in fact, it makes wonderful growth in the winter months. It is a grass we particularly recommend for the tableland and coastal country of N.S.W. and for similar conditions in other States. It is succulent, palatable, and a strong grower. It is deep-rooting, and, when once established, is drought-resistant, and forms a splendid permanent pasture which stands hard grazing and is excellent for sheep. When judiciously grazed it forms a close turf.

Perhaps nowhere else in the State has such interest been taken in pasture improvement as on the Northern Tablelands north of Armidale, and practically the whole district is unanimous concerning the merits of Phalaris Bulbosa as an all-the-year-round pasture grass for their conditions. In grazing trials over the last four years this wonderful grass has carried two and a quarter sheep per acre continuously and without any spells; and, further, these sheep grew much better and put on more weight than those on the native pasture carrying only one sheep per acre.

This grass also makes good hay if cut as soon as the flower heads are forming. About 10lbs. per acre is a reasonable sowing, and we suggest that about 2lbs. per acre of White Clover or $\frac{1}{2}$ lb. to 1lb. per acre of Subterranean Clover be included either with Phalaris alone or with Phalaris and other grasses in mixture.



A heavy growth of Phalaris Bulbosa, at Hawkesbury College.

TALL OAT GRASS

(Avena elatior)

In recent trials in our Northern districts this grass has proved very successful, and it is thought that it will become one of our leading artificial grasses for dry or sandy soils. It has a deep rooting system, which protects it against drought, and it quickly spreads when once established. It is a good winter grass and a quick grower. Stock may at first be averse to it, but when used to it, eat it readily, especially if sown in mixture with other grasses. Customers are recommended to try this grass in land which is rather light in character for other artificial grasses, and we would be pleased to have reports after testing.

It withstands heat of summer and the cold of winter, starts very early in spring and continues to give good grazing over a long period. It has been grown successfully in the Departments Trials at Bathurst, Cowra, Wagga and Glen Innes. It is best included in mixture with other grasses at the rate of from one to three pounds per acre.

AWNLESS BROME GRASS

(Bromus inermis)

A useful pasture grass which has not been obtainable recently. We have now secured a supply, and feel sure there will be many glad of the opportunity of introducing this grass into their holdings. It is a perennial grass, tall-growing, with root-creeping habit, a native of dry regions in Europe and Asia. In America, and particularly California, it is looked on as one of their hardiest grasses, being most drought-resistant.

It is of great palatability and very fattening. Success with this grass has been recorded at Hawkesbury, Bathurst and Glen Innes Experimental Farms, also on the Yanco Irrigation Area.

The early growth is slow, and this variety is not at its best until after the first year, but will then stand heavy stocking.

This grass is seldom used alone. Sow one to three pounds in mixture with other grasses. In suitable situations it will make good hay which has a high feeding value.

TALL FESCUE

(Festuca elatior arundinaceae)

This grass is now considered to be a distinctly valuable one. While it may not have quite the feeding value of some of the finer grasses, it is extremely hardy, withstands drought well, is adaptable to nearly all classes of soils, and if kept fed down, is quite palatable. It keeps green when other grasses are dried up, and thus gives that valuable green pick which helps to keep stock healthy. We would recommend a proportion of this in all mixtures to be sown on any land except low, moist flats. In the wet districts of New Zealand, Tall Fescue takes Ergot very badly which causes sickness and abortion in cattle. This trouble has not occurred in the drier climate of this country, but we would suggest that it should not be sown anywhere near swamps.

Mr. E. G. ———, O'Connell

24/10/26

"I take pleasure in adding that Yates' Broadleaf A.Y. Giant Upright is the finest Lucerne seed I have seen, and has germinated better than any other. I will have half a ton of it next season."

PASTURE GRASSES (Continued)

CHEWING'S FESCUE

A variety of Hard Fescue, which has been grown in New Zealand with success on poor, light, as well as heavier lands; it has formed a good sward where no other grass would succeed. It stands drought well, as its strong roots penetrate deeply into the ground. It is permanent, and throws up a large amount of feed in the early spring, particularly good for sheep. We would recommend that a little of this grass be included in all mixtures for permanent pasture, or, if planted alone, allow fifteen pounds per acre.

MEADOW FESCUE

(*Festuca pratensis*)

An excellent perennial grass for districts with fairly regular rainfall, and much relished by all stock. This grass has given good results under observation in many districts, and should be included in all grass mixtures for districts with good rainfall where long dry spells are unusual. The root crown has a creeping habit, and consequently stands close stocking well.

FESCUE FINE LEAVED

(*Ovina*)

This grass is not recommended as a pasture grass, but is excellent for lawn purposes, giving a very fine even sward.

POA PRATENSIS

(Kentucky Blue Grass)

One of the best winter grasses for tableland districts with a good rainfall, yielding a large quantity of herbage in the autumn, winter and early spring. It dies right down in the summer, but soon springs again after rain. It has a creeping habit resembling Couch, and, if once introduced, will become a permanency. The celebrated Blue Grass regions of America, so noted for their horses, take their name from this grass, which forms the bulk of the pastures there. As this grass is very delicate, and easily burnt up while in its younger stage, we recommend that it be sown in the early autumn only.

AGROSTIS

These grasses are used fairly largely for lawns, golf greens, etc., and their value for pasturage is low except in cold, harsh situations. We stock—*A. canina* (Brown Top); *A. vulgaris* (Red Top); and *A. stolonifera* or *alba* (Creeping, Bent or Fiorin).



Acri. Dept. Photo.

CANADIAN BLUE GRASS

(*Poa compressa*)

Unlike Kentucky Blue Grass, this grass does not creep to any extent, is much more leafy, and is a distinct bluish green, while the former is a dark green. Although little known, it has in experiments shown much greater drought-resisting properties than Kentucky Blue Grass, and will grow on much poorer soils. It germinates very well, will stand a deal of trampling from stock, and would seem to be most valuable for the Tablelands where there is a good and regular rainfall.

TEFF GRASS

(*Eragrostis abyssinica*)

An annual summer growing grass in very great favour in South Africa, especially where summer rains are prevalent. Its rate of growth is astonishing, and it may be cut twice or more during the season if sown early. Under good conditions it supplies excellent summer grazing and makes very fine hay. Sow 6lbs. to 8lbs. per acre broadcast. For Australian conditions we think Sudan Grass will give better results, and we only recommend trials of Teff Grass where there are ample summer rains. It must be re-sown every year.

ELEPHANT GRASS

(*Pennisetum purpureum*)

Although not strictly speaking a pasture grass, this recent introduction has proved to be a valuable acquisition and a fodder plant of considerable value. It will be noted from the photograph, reproduced herewith, that this is a vigorous growing plant, attaining a height of 12 to 15 feet. It stands cutting well, tests made by the Department of Agriculture showing a return of 50 tons and more of green fodder per acre per year, and also that this grass is of good feeding quality and that stock relish it, especially if not allowed to get too high and coarse. It may be either grazed or cut, and shows a very satisfactory food value by analysis. Milk yield and tests are well maintained. Elephant Grass is adapted to a wide variety of soils and climates, and might well be tried out by progressive farmers, even if only on their poorer land. The cuttings should be planted three feet apart in and between the rows.

For prices, see Current Price List. Approximate cost of postage and packing—Per 100, 2/9; per 50, 1/9; per 25, 1/3; per 12, 9d.

POA AQUATICA

(Water Meadow Grass)

This is used rather extensively on marshy land and swamps in Gippsland. The plant is fairly nutritious, but rather coarse. We can usually supply root stocks.

OTHER GRASSES

We also stock the following, which, however, are of minor importance except for special situations or purposes: Timothy, Poa Trivialis, Poa Nemoralis, Meadow Fox Tail, Crested Dog's Tail, Yorkshire Fog, Rib Grass or Lamb's Tongue.

SHEEPS BURNET

A useful sheep fodder very often sown with pasture grasses. For full description, see page 16.

Grass Seed Mixtures

FOR BETTER PASTURES.

THE FOLLOWING TABLE of Grass Seed Mixtures has been drawn up by the Agricultural Department of New South Wales as likely to do best in the different parts of that State. They are published not so much as a definite recommendation but more as a guide to help anyone interested in working out a pasture mixture for their particular requirements.

The table should prove valuable not only to residents of New South Wales, but to the whole Commonwealth, as these Grass Seed Mixtures should do well anywhere where the climate is somewhat similar to the different parts of New South Wales. We shall always be glad to go into further particulars with any farmer who has any grass seed problems, and to recommend pastures for his own particular conditions. The quantities per acre are the lowest that should be used. In soils of fair quality or where preparation of the land for sowing has been good heavier sowings can be made with advantage.

PLEASE NOTE.—Owing to the very dry spring in the seed saving districts, there was no crop of Phalaris Bulbosa, and there are no supplies this season, so this variety will have to be left out of all mixtures this year. For most of the mixtures we would recommend that Cocksfoot or Tall Fescue be included instead of Phalaris Bulbosa, as these grasses do very well almost anywhere.

SOWING GRASS SEED.—Wherever possible, the seed should be sown with the wheat drill, mixing the seed with superphosphate ($\frac{1}{2}$ to 1 cwt. per acre). The hoes or discs of the drill should be set to run on the surface of the ground, as the seed only requires to be lightly covered; run a harrow at right angles to the direction of the drilling if the seed has not been well covered by the drill.

Where it is impossible to use implements for sowing and covering, the seed should be broadcasted in and around stump holes, dug-out rabbit burrows, among fallen timber,

or any other suitable cover, in which it will be held, and later germinate.

When sowing mixtures of light and heavy seed, only small lots should be mixed at one time and the seed should be kept well stirred while distributing.

Where very small quantities per acre are being sown it will be found easier to do so by sowing half the seed first at half the rate per acre thus going over the land twice. By this means errors made in the first operation may be rectified the second time over.

For North Coast and Central Coast

N.C.C. 1

12 lbs. Paspalum Dilatatum
4 " White Clover

16 lbs.
N.C.C. 2
5 lbs. Rhodes Grass
2 " Lucerne

7 lbs.
N.C.C. 3
Renovation of Paspalum—Plough,
Harrow, then sow as under
2 lbs. Tall Fescue
2 " Italian Ryegrass
2 " Perennial Ryegrass
2 " Wimmera Ryegrass
2 " Cocksfoot
1 " Phalaris
1 " White Clover
1 " Subterranean Clover
1 " Perennial Red Clover
1 " Lucerne
1 " Sheeps Burnet

16 lbs.
N.C.C. 4
Renovation of Paspalum
Where unable to plough, broad-
cast and harrow in the following
3 lbs. Wimmera Ryegrass
2 " Italian Ryegrass
2 " Perennial Ryegrass
2 " Subterranean Clover
1 " White Clover
2 " Sheeps Burnet

12 lbs.
C.C. 5
The following mixture is suitable
for the Central Coast only
3 lbs. Phalaris Bulbosa
6 " Perennial Ryegrass
2 " Wimmera Ryegrass
2 " Perennial Red Clover
2 " Subterranean Clover

15 lbs.

N.C.C. 6 (Heath Country)

6 lbs. Paspalum Compressum

For South Coast

S.C. 1

12 lbs. Paspalum Dilatatum
4 " White Clover

16 lbs.
S.C. 2

3 lbs. Phalaris Bulbosa
4 " Wimmera Ryegrass
4 " Tall Oat Grass
2 " Cow Grass
1 " Subterranean Clover
1 " White Clover

14 lbs.
S.C. 3

4 lbs. Cocksfoot
4 " Tall Fescue
8 " Perennial Ryegrass
2 " Perennial Red Clover
1 " Subterranean Clover
1 " White Clover

20 lbs.

For New England and Northern Tableland

N.T. 1 (Black Soil)

4 lbs. Phalaris
2 " Cow Grass

6 lbs.

N.T. 2 (Red Soil)

2 lbs. Tall Oat
4 " Tall Fescue
6 " Cocksfoot
2 " Cow Grass

14 lbs.

N.T. 3 (Black Soil)

2 lbs. Phalaris
10 " Perennial Ryegrass
3 " Cow Grass

15 lbs.

N.T. 4 (Poor quality Ridges)

2 lbs. Tall Fescue
4 " Wimmera Ryegrass
4 " Cocksfoot
2 " Sheeps Burnet
1 " Subterranean Clover

13 lbs.

N.T. 5

Old Potato Land to be tested
3-4 years
10 lbs. Perennial Ryegrass
2 " Cow Grass

12 lbs.

For Central Tablelands

C.T. 1

4 lbs. Phalaris Bulbosa
2 " Lucerne

6 lbs.

C.T. 2

6 lbs. Tall Fescue
6 " Cocksfoot
2 " Lucerne

14 lbs.

C.T. 3

2 lbs. Tall Oat Grass
4 " Wimmera Ryegrass
1 " Lucerne
1 " Subterranean Clover

8 lbs.

For Southern Tablelands

S.T. 1

4 lbs. Phalaris Bulbosa
2 " Lucerne

6 lbs.

S.T. 2

6 lbs. Tall Fescue
2 " Cocksfoot
2 " Lucerne

10 lbs.

S.T. 3

2 lbs. Tall Oat Grass
4 " Wimmera Ryegrass
1 " Lucerne
1 " Subterranean Clover

8 lbs.

S.T. 4

6 lbs. Perennial Ryegrass
4 " Cocksfoot
2 " Sheeps Burnet
3 " Cow Grass

15 lbs.

For Slopes

S. 1

3 lbs. Lucerne
3 " Wimmera Ryegrass

6 lbs.

S. 2

2 lbs. Subterranean Clover
3 " Wimmera Ryegrass

5 lbs.

For Plains

SOUTH

P. 1

2 lbs. Subterranean Clover
3 " Wimmera

5 lbs.

NORTH & WEST

P. 2

3 lbs. Wimmera Ryegrass
3 " Lucerne

6 lbs.

P. 3.

6 lbs. Wimmera

CLOVERS

The Clovers are a wonderful family of plants and supply a great need in Australian pastures, namely—Winter and Early Spring Feed. In addition, their high protein content makes them good flesh builders rather than fatteners, they make excellent hay, and are particularly valuable as soil renovators.



Farmers, especially those in areas where a fair rainfall is experienced, are realizing more and more the great value of the Clovers as **Soil-renovators**, as well as fodder crops of the highest quality, either alone, in pasture, or sown with other green stuff or hay crops.

For renovating worn-out land, and for keeping valuable farming land in proper condition, nothing will do more good than the Clover family (or if preferred other legumes, such as Field Peas, Field Lupins and Soy Beans, and in warm climates Cow Peas). They take little out of the soil but add a most valuable manure in the form of nitrogen, which is gathered from the atmosphere. When the crop is ploughed in the nitrogen is made available, while the foliage, stems and roots, form necessary "humus," which gives "life" to the land.

The addition of one or other of the Clovers, when laying down pastures or sowing greenstuff or hay crops, will provide a much **better balanced ration** of which stock are very fond; and when the crop is done the Clover will often give a good picking for a considerable period, afterwards being ploughed in for **green manure**.

Clovers succeed best in good "sweet" land and usually respond well to superphosphate. Sow 12lbs. to 15lbs. per acre alone, or if with pasture grasses 2lbs. to 3lbs. per acre.

Generally speaking, Clovers should be sown in the autumn, but in good seasons successful results can be obtained from spring sowing.

YATES' A.Y. SUPERFINE WHITE CLOVER

(*Trifolium repens*)

This is used perhaps more than any other for sowing down with Pasture Grasses. It spreads quickly, especially in moist situations. Widely used on the North Coast of N.S.W. in Paspalum and Rhodes Grass Pastures, giving a splendid pick during the winter when these two grasses are more or less dormant. Succeeds in a wide variety of soils and climates.

YATES' SUPERFINE PERENNIAL RED CLOVER or COW GRASS

Increased interest is now being taken in this Clover as it is now found that it will do well in almost any district of good rainfall. It is a vigorous grower and is splendid for milk production. When sown with oats which are used for grazing it comes away strongly in the spring and keeps up the flow of milk as the oats gradually ripen off. While perhaps not as perennial as White Clover, Red Clover makes a very fine pasture and for some time will give a much larger yield than White Clover. From one to two pounds per acre should be included in grass mixtures. When sown with oats use two to three pounds per acre. Planting alone use ten pounds per acre.

TRIFOLIUM INCARNATUM (or Crimson Clover)

This is an annual, a quick grower, and will stand a great deal of hard grazing. It is useful as a stubble plant sown alone or with Rye Grass after the grain crop, when it will produce a heavy crop very early the following spring.

BERSEEM (or Egyptian Clover) (*Trifolium Alexandrinum*)

An annual Clover which **must be sown in early autumn**, as it makes its growth during the autumn, winter and early spring months. Sown in early autumn in a favorable locality, it will give two and even three cuttings of valuable Lucerne-like greenstuff during the winter and early spring. It can also be sown in the autumn with Oats, and after being grazed for a time it can be cut in the spring with the Oats for hay.

Mr. R. S. —, *Yass*,

17/9/26.

"It might interest you to know that in March 1925 I scattered a few pounds of Subterranean Seed down a creek; in March 1926 it was visible in patches here and there. The other day I followed the creek down and found it growing all over the place, in spite of the paddock being overstocked for the year. No "Super" was used at all."

CLOVERS (Continued)

SUBTERRANEAN CLOVER

See next page.

ALSYKE

(*Trifolium hybridum*)

Combines to some extent the qualities of Red Clover and White Clover. It will sometimes succeed where Red Clover does no good, and can be classed as permanent in suitable locations.

STRAWBERRY CLOVER

(*Trifolium fragiferum*)

An excellent variety for low, wet, swampy land subject to floods or inundations through the backing up of tide water. This plant has a trailing habit, and thrives where no other Clovers and very few Grasses will grow; in our opinion, it should be associated with Water Couch. If one pound or so per acre is sown in suitable situations it will very soon spread. It is very largely grown in portions of Gippsland, where the land is swampy, and is found to be very fattening. Cattle do particularly well on it.

SHEARMAN'S CLOVER—Similar to the above and probably a variation; root only of this variety; supplies very doubtful.

ENGLISH TREFOIL

(*Medicago lupulina*)

An annual Clover succeeding in light dry soils, greedily eaten by sheep. It has good bold seed.

LOTUS (Varieties)

LOTUS CORNICULATUS (Birdsfoot Trefoil)—A deep rooting perennial Clover maturing the second year, and producing a large quantity of leafage.

LOTUS MAJOR—Land that requires draining can often be improved with this Clover.

LOTUS ANGUSTISSIMUS—A hardy Clover which does well in rough country and should be very suitable for sowing on burns.



BOKHARA CLOVER (or White Sweet Clover)

(*Melilotus alba*).

This is a clover with a big reputation for renovating land for green manuring and for preparing land for the introduction of lucerne. The plant makes very big root growth and, being a biennial, the plant dies out after the second year and the big root growth rots down very quickly.

Bokhara can be grazed profitably by all classes of stock, the fodder value, by analysis, being extremely high. There is practically no danger of bloat with this Clover and it is a great milk producer. It is also an excellent honey plant.

If used as a rotation crop it can be ploughed in either the first or second year according to circumstances. Seeding does not take place until the second year, and so long as this is prevented there is no danger of the plant getting out of control.

This plant should not be grown in wheat paddocks. Sow 8 lbs. to 10 lbs. per acre broadcast, or 5 lbs. in drills.

MEDICAGO ORBICULARIS

(Burrless or Button Trefoil)

This is a variety of Trefoil Clover which has attracted attention in Tamworth and other Northern districts. It is very similar in its growth and appearance to our Native Trefoil or Burr Clover, but the seed is not enclosed in a burr; this is manifestly a great advantage to wool growers. It is an annual, but seeds itself so profusely that it comes up every spring, and is permanent when once introduced. Supplies unobtainable at present.

MEDICAGO DENTICULATA

(Burr or "Native" Trefoil)

This is an introduced member of the Clover family, but has become so widespread that it has earned the title of "Native." It is now one of the commonest plants in N.S.W. and furnishes a tremendous amount of feed. It grows with the first good autumn rains, giving a heavy yield of lush green fodder throughout the winter and spring. With the approach of summer the plant ripens off and the seed, falling on the ground, then forms a most valuable and highly concentrated food. This the sheep will lick up from the ground and do well on it. Country that grows this Trefoil is essentially fattening country. The burrs are a great disadvantage in purely wool growing country.



Subterranean Clover (Trifolium subterraneum)

This wonderful Clover has long been known in Southern European countries, where it is looked on as a weed. The credit for introducing it and proving its value in the Commonwealth belong to South Australian farmers, who have been working on it for some 45 years.

Briefly, the plant may be described as a prostrate growing annual, which is covered all over with fairly long, soft hairs. The flowers are formed in clusters of three or four and are a creamy to pinkish color. Immediately after flowering the flower clusters grow downwards until the seed-head is pushed below the surface of the soil, where it becomes "anchored". It is from this peculiar habit that this Clover derives its name Subterranean.

The growing period in favorable districts is six months or more, the seeds germinating with the first good autumn rains in April-May. During the winter the plants make slow but steady progress, but with the first warm touch of spring they burst into rapid luxuriant growth, which continues until really hot weather starts.

This Clover seems able to adapt itself to almost all types of soil with suitable rainfall conditions with one provision, viz., that it has a plentiful supply of phosphoric acid. We cannot stress too greatly the importance of phosphatic manures in connection with this Clover, and in our opinion no commercial crop responds so readily to liberal applications of such manures. All fertilisers for this crop should be applied in the autumn, if possible before the first rains.

The seed should be sown after the first autumn rains which are sufficiently heavy to germinate them. To establish Subterranean Clover properly the first year, from three to six pounds per acre should be sown if the land has been thoroughly prepared, and even more can be used if the soil is very rich. On lighter land and where it is to be sown with a cereal crop, about two lbs. will probably be sufficient.

Order January-February for Sowing with first good Autumn rains.

We are convinced that Subterranean Clover will play a most important part in farming practice in a great many parts of this State. Where soil and seasonal conditions are favorable this Clover will produce more high-class fodder than almost any other plant.

Being a legume it is of great value as a soil improver and for this reason, and for the reason that it flourishes under such varying conditions, we believe that it will be sown on a great deal of second-class land to the great benefit of the soil, and resulting in bigger returns to the land holder.

Another quality which should not be overlooked is its propensity for choking out undesirable weed growth. Particularly is this noticeable in the case of sour, sorrel growing country, it being amply proved that Subterranean Clover, in conjunction with a liberal dressing of phosphatic manure, will absolutely "wipe" out this and similar weeds and provide in their stead a pasture which it would be hard to better.

It is exceedingly nutritious in any form, either green, or as hay, or as dry feed in the paddock. It produces enormous quantities of seed which are relished and picked up by stock, just as they do the seed of ordinary burr trefoil. One of the greatest advantages of this Clover over the ordinary burr trefoil, from a sheepman's point of view, is that the seed is not enclosed in a hooked burr and will not become attached to wool.

When sowing down pasture mixtures it is undoubtedly good policy to include some of this Clover, say half to one pound. It should do well in this State in all parts of our coast and tablelands, and parts of the Western Slopes where the rainfall exceeds twenty inches per annum, and is fairly regular in autumn and spring.



A FINE PASTURE OF SUBTERRANEAN CLOVER AND GRASSES. Note the heavy luscious growth.

LUCERNE THE KING OF FODDER CROPS

"The crop that gives a continual harvest without an annual ploughing or seeding."

IT IS A FACT worthy of note that Lucerne has been cultivated by man for over 2,000 years.

This in itself shows the great value and usefulness of this hardy, long-lived perennial forage plant. As evidence of its adaptability it is now grown more or less extensively in every continent of the globe.

In our own country Lucerne has already become one of the foremost of our fodder and grazing crops. Each year the area under Lucerne is increased by tens of thousands of acres, and this increase is undoubtedly due to a now wider spread knowledge of its adaptability to varying situations, soils and climates.

For many years it was considered that Lucerne would not succeed unless sown on choice alluvial flats, but recent experience has shown this to be a fallacy, and that its restricted use in many districts was due to incomplete knowledge.

The point we would emphasise here is that the "range of adaptability" of Lucerne, once considered limited to rich alluvial flats, has now been proved to include any deep reasonably good agricultural land with a rainfall of at least twenty inches. On such areas good "grazing" Lucerne can be successfully grown, making the land capable of carrying a much heavier stocking, and afford-

ing a wonderfully quick "shoot" after rain. Under suitable conditions in clean land, and where our best Re-cleaned YATES' ^{BROADLEAF} ^{AY} ^{GIANT-UPRIGHT} LUCERNE has been planted, it will yield continuously, for an indefinite number of years. It is one continual harvest without an annual ploughing or seeding.

For many years we have made a great speciality of our Lucerne seed, and amongst keen, discriminating farmers our standard of quality, signified by the name, YATES' ^{BROADLEAF} ^{AY} ^{GIANT-UPRIGHT} LUCERNE has become a tradition. Do not forget that when you sow Lucerne seed you are putting down a crop which you hope will yield you returns for several years. Is it not then good policy to do everything in your power to make it a success? With this ideal in mind, work your land well to obtain a fine, firm, clean seed-bed, and—this is just as important—use the BEST SEED OBTAINABLE.

Land that you intend putting under Lucerne should be fallowed long before sowing time, and kept well worked in order to eradicate weeds and to obtain a fine tilth. Lucerne seed, on account of its small size, requires a fine compacted seed-bed in order that the roots may get a grip of the soil particles. In addition, the seed should be very shallow in the ground, the lightest possible covering being all that is necessary.



YATES' ^{BROADLEAF} ^{AY} ^{GIANT-UPRIGHT} LUCERNE

YATES' ^{BROADLEAF} ^{AY} ^{GIANT-UPRIGHT} LUCERNE in sealed bags is re-machined and tested seed of extra prime quality of a superior type of N.S.W.-grown Lucerne, which is saved on selected farms in those districts in which, owing to special natural conditions, there has been evolved a long-standing, drought-resisting strain, which has proved itself for Australian conditions.

Most of these farms have supplied the seed crop to us for many years past, and we know that it is of the true Broadleaf Giant Upright pedigree.

YATES' ^{BROADLEAF} ^{AY} ^{GIANT-UPRIGHT} LUCERNE is supplied through our country agents in 25 lbs. and 50 lbs. net sealed bags, printed with our own brand, or will be supplied direct to farmers in whatever quantities required. Growers should exercise caution, and accept only packages closed with our metal seal, and branded as above.

WRITE FOR PRICES, STATING QUANTITY REQUIRED.

Sixteen to twenty pounds per acre is a fair sowing for good situations with a moist subsoil if sown broadcast; or ten to twelve pounds if drilled. In dry areas as low as six pounds is found sufficient.

SOWING RAPE

Yates' "A.Y." Dwarf Broadleaf Essex

Sowing Rape is one of the most profitable stock fodders for fattening. In addition, it is a very useful rotation crop and soil renovator on account of its vigorous deep rooting habit, which penetrates subsoils to a considerable depth.

RAPE is the great fodder plant for sheep husbandry in Australia, and with the widespread recognition of the value of combining sheep and wheat, Rape is now becoming a very important crop on the wheat farm, not only for sheep feed, but also a rotation crop and for renovating wheat land. The cost of the seed is so little, and the cultivation so simple, that it cannot fail to be much more largely used.

If paddocks, which are showing signs of exhaustion under wheat, are ploughed and a crop of Rape sown, say early in March, it will give an enormous quantity of sheep feed during the winter and following spring, which will fatten ten or twelve sheep to the acre for some months, and if during the following summer the remains of the crop and sheep droppings are ploughed in, the land will be very much enriched, and if sown with wheat again, a greatly increased yield will result. It is easy to see how profitable it is to utilise the land in this way. Even if owing to unfavourable seasons, the crop of Rape comes to nothing, there is very little lost, as the cost of seed is so little. Rape is equally good for pig feeding or even cattle, so long as it is not given in quantity to milking cows, as it is apt to taste the milk.

Where large breadths of land are not available, there are often paddocks about a homestead which will give enormous yields of fodder if sown with Rape, and which would be particularly valuable for feeding stock during the scarce season; they all eat it greedily.

Sheep put on to Rape fatten very quickly; even old broken-mouthed ewes, that would starve on an ordinary pasture, very soon put on flesh, and are fit for the butcher. They should, however, be sent to market as soon as they are "topped off," as if put back on to grass they very soon lose condition again. As a means of fattening lambs for the English market, there is nothing to equal Rape; they are soon in the pink of condition as required for the export trade, and if there are two or three paddocks of Rape, so that as soon as eaten down, each paddock can be "spelled," the plants soon recover and give a second or third crop almost as good as the first; in fact, if sown in the early autumn it should give several months' feed.

Poultry farmers are finding a small patch of Rape a valuable asset, and for this purpose small successional sowings should be made through the autumn and again in the spring.

Some growers prefer to sow it with Rye Corn, say half-bushel of Rye and two pounds of Rape; others sow it with Mustard, using half-a-pound with four pounds of Rape per acre. The inclusion of Mustard corrects the tendency of Rape to sometimes scour.



Rape is Unexcelled for Pig Feed.

We recommend sowing in February, March or April, after the good autumn rains, but as early as possible after the middle of February. It can also be sown with advantage in the early spring, especially in the cooler districts. It is extremely hardy. The land should be deeply ploughed and well worked, but if sown on stubble land, it would be enough on light soils to thoroughly stir the surface with a disc harrow; but ploughing and harrowing would be much better still. Sow three pounds per acre in drills, or four to six pounds broadcast (if drilled, so much the better). Where a machine is not available it may be sown broadcast by mixing with several times its bulk of dry soil, which will materially help to distribute the seed evenly; or it may be evenly distributed with a Cahoon or Chicago Broadcast Seed Sower. We can supply these useful little implements—see page 17. We do not recommend that Rape should be sown on poor hungry land, as it will not succeed; it requires good soil and deep cultivation, and will well repay the labour expended in preparing the land thoroughly. Where manure is employed in growing Rape (and it is a crop which quickly responds to such attention) we would recommend one rich in ammonia—say blood manure or fine bonedust; superphosphate is also used with great success.

As there are several varieties of Rape, some very much better and yielding larger crops than others, also, as many of the cheapest samples are tainted with wild mustard or yellow weed, we would strongly advise growers to buy our re-cleaned seed, and note that each bag is sealed and branded.

LEGUMINOUS CROPS FOR AUTUMN PLANTING

MARKET PEAS

In the highland districts around Sydney and on the Tablelands, many farmers now devote a portion of their holding to the growing of green peas for the Sydney market, and in recent years this has proved very profitable. The growing of peas or beans for the vegetable market is excellent practice from a rotation point of view; it rests the land from ordinary farm crops, gives it the advantage of a leguminous crop, and leaves the land in an improved condition for succeeding crops. A fair quality of land and a reasonable use of suitable manure are advisable for best results. Yates' Selected N.Z. Grown Yorkshire Hero Peas is the best main crop variety, but there are also now other sorts largely grown, such as Yates' Utility, Little Marvel, Witham Wonder, William Hurst, American Wonder, Richard Seddon, English Wonder, and Greenfeast, and we shall be pleased to quote on application. Usually 2 bus. per acre is a good sowing and we advise sowing in drills far enough apart to permit frequent horse cultivation in the early stages of the crop. Prices and varieties on application.

FIELD PEAS

This is a crop which we consider does not receive the attention it deserves. It is an excellent fodder for sheep, pigs and other stock, but we think its main value is when grown as a combined "legume-cereal crop." For this purpose Field Peas are excellent sown with oats or wheat. If sown early with oats they can be grazed off once or twice during the winter and then let go dry for hay. The addition of the pea straw to oaten hay makes a much more balanced ration and is very palatable to stock.

If sown alone they may be grown for topping off to maturity and when cut fed to pigs, or they may be cut green, just after flowering, for cattle or pig feed.

This crop is classed among the best of the soil improving crops. Even if only the roots are ploughed in the soil is greatly enriched.

Field Peas though not so hardy as Tares or Vetches are earlier maturing, usually cheaper in price, and one grower reports that when grown with a cereal it will stand the trampling of grazing cattle better than will Tares under similar conditions. Field Peas can be sown in the autumn or spring, but in mild districts we prefer autumn sowing.

Sown alone $1\frac{1}{2}$ to 2 bushels per acre broadcast, or say 30lbs. in drills 2 feet apart.

Sown with cereal crop try $\frac{3}{4}$ bushel Field Peas with $1\frac{1}{2}$ bushel oats or wheat per acre.

We usually stock the Grey, Blue, and Dun varieties of Field Pea, the Grey and the Dun being perhaps the most popular.

ANNUAL BLUE LUPINS

For green manuring these provide one of the best crops for ploughing in, especially in our cooler districts. When practicable we recommend autumn sowing, but they will succeed if sown in early spring. Lupins grow very rapidly and produce an immense amount of top. Sow at the rate of 2 bus. per acre. For small trials 3 lbs. will sow an area of 100 square yards (10 yds. x 10 yds.)

KUDZU VINE

(Pueraria Thunbergiana)

We have had several enquiries for this. It is a perennial legume best adapted for poor soils near the coast. We can only supply in packets and recommend that the seeds be sown in a good patch. The plants will quickly grow and send out long runners which root at every joint. These can then be severed and transplanted and the required area thus quickly covered. Packets 1/-.



Grey Field Peas, North Coast, N.S.W.

TARES or VETCHES

Golden and Grey or Black

These are important members of the legume family and are largely grown both for fodder and as a winter green manure. In both cases it is preferable to sow in conjunction with a cereal crop, though they may be used alone as green manure. When used for feed the combination of legume and cereal gives a well balanced ration, and the upright growth of the cereal supports the Tare, which is a climbing or trailing plant. Cows milk well on Tares and it is an excellent fattening crop for pigs.

In some of the North Coast districts this crop, either alone or in combination with Rye, Oats, or Barley, is sown on the Maize flats, fed off during the winter, and in the spring the residue ploughed in for green manure.

Not only does this provide excellent winter fodder but it also maintains the fertility of the flats, thus giving better yields in the succeeding crop.

In order to encourage a quick and heavy growth, we advise the application of Superphosphate with this crop.

Tares succeed in a wide variety of soil and districts, so long as there is a good winter rainfall. Seed should be sown in early autumn from February onwards.

We would suggest a sowing of from $\frac{1}{2}$ bus. to 1 bus. Tares with a bushel or half-bushel of Oats, Rye, or Barley (or a mixture of the three).

The ratio will vary according as the main crop is intended to be the cereal or the legume. The Department of Agriculture recommend 30lbs. Tares with a bushel of grain. The seed can be mixed and broadcasted or it can be drilled in.

If sown alone up to 2 bushels per acre is ample.

HORSE or TICK BEANS

Somewhat similar in appearance of plant and habit of growth to the garden Broad Bean. They are grown in cool climates for the seeds which form excellent foodstuff. But their main usefulness is as a green manuring crop specially for orchards. When well harvested the haulm also makes useful fodder. Sow about two bushels per acre in the autumn and early winter.

YATES' Re-cleaned SEED GRAIN

IN SEALED AND BRANDED BAGS

IT PAYS to sow only re-machined samples. Many farmers do not yet recognise the importance of procuring the primest and purest samples of grain when sowing for hay, grain or green fodder, and for the sake of a few pence per bushel thousands of bags of the most inferior seed oats are annually sent away to our dairy farmers to grow fodder.

The sowing of Re-cleaned Farm Seeds means CLEANER CROPS, SURER CROPS, HEAVIER CROPS and what is perhaps of the most importance, CLEAN LAND.

The infesting of land with weed seeds, when, by paying a little extra price, seed which has been thoroughly re-dressed is obtainable, is surely a poor policy.

Yates' Re-cleaned Farm Seeds are the primest farmers' samples obtainable, grown in selected districts, from which the thin pinched seeds, the broken seeds and weed seeds, have been practically eliminated, and thus is sown only plump, healthy seed, which will give a good even stand, even under conditions when inferior seeds would perish.

EVERY BAG IS SEALED AND BRANDED.

BARLEY

Barley is the earliest of the grain crops to mature and in this earliness lies also its great value as a green fodder crop. It is one of the sweetest fodders grown and is relished by all classes of stock.

For the farmer's purposes, the Barleys can be classed into three, namely:—Cape Barley, Skinless Barley and English or Malting Barleys. Cape Barley is the one most generally used for green fodder; it grows very quickly, but as it is not so hardy as other grain, it is most suitable for early use in cold climates. Skinless is also a good variety, coming very early to maturity, and affording two cuttings; it should be grazed after each cutting; the close feeding seems to cause it to come again with renewed vigor. English or Malting Barley is usually grown for grain for malting purposes, but there are two varieties which absolutely stand out as green fodder sorts, viz., Trabut and Pryor.

Trabut is a heavy yielder and abundant stooler, maturing two to three weeks earlier than Cape. Pryor is similar to Trabut, and is very leafy with fine succulent stems.

These Barleys all make excellent silage. The addition of Field Peas when sowing makes a combined cereal-legume crop of high nutritive value.

Barley should be sown broadcast at the rate of two bushels per acre, or if drilled one bushel should suffice.

RYE CORN

Rye is a very hardy plant, and is largely used for winter feed, especially where the climate is severe; it will stand the heaviest frost. It is particularly good when fed off; many experienced farmers preferring to use it this way, as they find their stock do best while the Rye is young.

It will stand grazing all the winter, and rapidly grows again after being eaten down. It is also used for mixing with Tares, the Rye serving to hold the Tares off the ground. Rye comes into use very early. It is also sown to advantage mixed with Rape. The straw is very valuable for thatching, and some farmers sow the headlands of their hay paddocks with Rye Corn for thatching the stacks. Sow about two bushels to the acre.



A fine Wheat crop grown for seed on the Western Slopes.

YATES' Re-cleaned SEED GRAIN

IN SEALED AND BRANDED BAGS

SEED OATS

Prime Heavy Re-cleaned Samples

The importance of sowing only re-cleaned and re-graded Seed Oats for green fodder as well as for grain is now beyond the experimental stage. The high cost of labor and high land values make it more than ever necessary to get the most out of the cultivated land. It is better to have ten acres of a really good crop than twice the area giving only an indifferent yield.

We have proved from varied farming experience that the most profitable method of feeding dairy cows for eight months of the year is to plant **Algerian Oats** for grazing. To get the best results the cultivation land should be divided into three or four small paddocks; the crop which has been eaten down soon recovers after a few weeks spell, but continual grazing is wasteful, not good for the crop or the cows. We recommend that a dressing of 1 cwt. of Bonedust or Superphosphate be used, also five or six pounds of Clover seed per acre be planted with the Oats. This will give a more balanced ration and so increase the milk flow; it will also make the land increasingly fertile, and give a good stubble-feeding during the following autumn.

We have found Algerian Oats to be by far the best variety for grazing; being of finer growth it stands a good deal of trampling and its spreading habit and strong root growth prevent it from being easily pulled out. If shut up in the early spring a crop of hay may be harvested in addition.

For cutting purposes some of the vigorous-growing early Oats like Mulga, Sunrise, etc., may prove superior in the milder climates; these are tall-growing and have fleshy stems, and come very quickly; in fact, they grow almost as quickly as Barley and are superior to it for feeding value. They will however not stand extremes of frost like the Algerians, and, on account of their coarse fleshy growth, do not stand trampling and hard grazing so well.

Yates' Extra Prime AY Re-Machined Samples are the very pick of the lines offering, thoroughly re-cleaned and graded by our special machinery. Every grain should produce a strong well-nourished plant under proper conditions

LIST OF VARIETIES

Algerian—See foregoing, the best all-round variety for grazing, for green feed, for hay and for grain; stools well, and is a great drought resister.

Mulga—A selection from Sunrise and in many ways an improvement on that variety. It is a very early maturing variety and thus an excellent oat to sow early for winter fodder. It is a sparse stooler and should not be sown too thinly.

Sunrise—An early variety with medium coarse straw, very suitable for coastal and warm districts; not a good stooler, therefore should be sown rather thicker than Algerians. Usually Mulga is preferred to this variety as it is considered an improvement. Stands feeding off well.

Guyra—Early, medium straw.

Ruakura—An early sort, thereby often escaping the rust, fine straw, medium foliage, largely grown on the coast.

Yarran—Cross-bred from Algerian, which is very promising and may replace the latter for tableland conditions.

Myall—A selection from Sunrise which seems to show better character than its parent. Recommended specially for use on the coast.

Warrigal—Selected from Sunrise in 1921. This Oat is essentially a grain sort, the seed being large, white and remarkably plump. Recommended as a white feed Oat.

SEED WHEATS

Prime, Heavily Re-cleaned Samples.

Crown from Select Stocks.

Wheat is largely used for green fodder and for hay as well as being the world's most important grain crop. It stands dry conditions better than almost any other grain and is therefore of great value for fodder and for hay, as well as for grain in districts of low rainfall. It will often give good crops in seasons which caused oats to be a failure.

Following we give a list of varieties which we offer this season, but as supplies of some varieties are somewhat limited, early enquiries are invited. The advantages of sowing only whole plump grain free of pinched broken seeds, weed seeds and foreign matter, is now proved to be worth many, many times the slight extra cost per acre for Re-cleaned Seed; in unfavorable seasons it may mean the difference between a crop and a failure.

Sow up to 2 bushels per acre together with a dressing of 56 lbs. to 112 lbs. superphosphate per acre, according to location and quality of the land.

LIST OF VARIETIES.

Florence (Very Early)—Stools fairly well, growth vigorous and compact, suitable for hay or grain, but especially valuable for green feeding, grazing and soiling in our coastal districts.

Thew (Early)—Medium tall, good stooling sort. Recommended for hay and for green fodder in the coastal districts where it has proved one of the best.

Firbank—This old popular hay variety is again available. It is one of the best varieties for coastal districts for green feed and among the best hay varieties for nearly all districts.

Canberra (Early)—A very productive grain variety and one of the best for late sowing in hot dry districts. Rather slender straw.

Waratah—One of the newer varieties which is coming into great prominence as a high yielding grain variety. In the various wheat growing competitions throughout N.S.W., it has been consistently among the leaders.

Hard Federation (Mid-season)—A favorite variety in the Central Tablelands, Slopes and Northern districts for grain production. Hard grain, stands feeding off. A very good all round wheat.

Soft Federation—Although rather susceptible to rust and to bleaching, this is a very popular mid season wheat. It is a high yielding grain variety and very drought resistant.

Marshall's No. 3 (Late mid-season)—A variety as valuable as a hay wheat, as it is for grain. It is a good stooler and should be sown early. Does well throughout the wheat belt.

Yandilla King (Late)—Another variety which can be grown for both hay and grain and does well in any part of the main wheat belt. Stools well.

VARIETIES (OATS)—Continued

Tartarian (Side Bearing)—Late. One of the earliest white grained varieties, and good for green fodder, especially on the cold highlands.

Dun—Late. Produces hay and grain of fine quality, largely used for horsefeed by racing folk.

Heavy Black—For green feed in cold climates.

Heavy White—A green fodder Oat for moist cool climates.

Write for Prices (and samples if required) stating quantity wanted.

Sundry Fodder Crops

FOR AUTUMN PLANTING

BURNET (SHEEPS).—This fodder plant has proved itself suitable for our dry inland country, where it would be futile to sow English grasses, and where the soil is not suitable for growing Lucerne. It thrives alike in rich or poor land, and on either flats or hills; it gives great results in the undulating land about Wagga, where neither Lucerne or Rape will succeed. It is one of our best drought resisting plants, and remains green when every other fodder is burnt up, springing again with light showers that would have not the slightest effect on the grass; it is absolutely permanent, and, when once established does not die out. It is a herb, not a grass, grows from fifteen to eighteen inches high, and has a long tap root, which enables it to stand dry weather and grow when other plants, with shallower roots, are drought-stricken. It grows both in summer and winter, giving the greatest rush of feed in the spring. All animals are fond of it, and thrive well on it, but it is particularly suitable for sheep. Sow ten to twelve pounds per acre. Burnet may, with advantage, be included in Grass Seed Mixtures for poor soils; being a deep rooter it does not rob the surface-rooting grasses, and succeeds where better grasses fail.

CABBAGE, CATTLE.—In cool climates the very large late varieties have a value as cattle feed. Sow in late summer and autumn in seed bed, and afterwards transplant. Sow about half-pound for each acre to be planted out.

CHOU MOELLIER or MARROW KALE.—A recently introduced variety of Kale. Of extremely vigorous growth and yields enormously. The leaves should be cut, not pulled, off the stem, and fresh growths are then formed immediately. The stem is also quite free of woody fibre, and is also greedily eaten by all classes of stock; it can be chaffed after the crop of leaves is exhausted. Sow in early autumn, two pounds to the acre if drilled, or one pound is sufficient if transplanted; the drills should be two feet apart, allowing twelve or fourteen inches between the plants. It does well, even in dry seasons, is a splendid milk producer, and does not taint the milk even if fed alone. Trial packets, 6d.

THOUSAND-HEADED KALE.—Few plants will give so great a quantity of feed per acre as Thousand-Headed Kale, and all animals eat it greedily. These should all be sown in a seed-bed, and afterwards transplanted to two-and-a-half feet between the plants and three feet between the rows. For the best results sow in summer or early autumn. Trial packets, 6d.

CANARY SEED.—So largely grown for bird seed. It may also be used for hay purposes, requires similar culture to wheat; sow 17 to 20lbs. per acre. Queensland grown seed, and extra large seed, Morocco grown.

CHICKORY.—Valuable for its deep rooting action and withstanding droughts. Usually sown in mixtures for second class land.

LINSEED (N.Z. Grown).—This is grown either for seed, for oil purposes, or for the fibre for linen making, but requires special conditions, which intending planters should inquire into if putting in large areas.

MUSTARD.—For a quick green fodder for fattening lambs, Mustard can be recommended. Sow eight pounds per acre. It is also frequently mixed with Rape. It is ready a few weeks after sowing.

SAINFOIN, YATES' DOUBLE CUT.—As it has not proved to be in demand here we have ceased to carry regular stocks but will specially import for anyone requiring a quantity. It does exceedingly well on the chalk soils of the south of England.

SWEDE TURNIPS

Swedes can be grown cheaply and with comparative ease on much of the upland country of N.S.W. not only for stock but for the vegetable market. For sheep they make an excellent fodder especially as they become available during the winter and early spring when most needed. Sowing should be made in February, March and April at the rate of two to three pounds per acre in drills about two feet six inches apart. Up to one hundred weight of superphosphate will cause considerable increase in weight and vigor of crop.

YATES' CHAMPION PURPLE TOP.—A standard globe-shaped variety, which gives wonderful returns and is the standard sort for growing for market. Our strains are unexcelled, the crop comes in evenly and the Swedes are well shaped, large and keep well.

YATES' MONARCH.—A large tankard-shaped variety, with purple top. Heavy yielder and good keeper. Excellent for stock or market growing.

FIELD TURNIPS.—Valuable for providing stock feed in the winter and early spring months. They are quick growers, especially the white fleshed sorts. They can be planted when it is too late to sow Swedes, and will yield heavy crops. Sow about two pounds per acre in drills. We usually stock leading varieties, both white and yellow fleshed.

MANGOLDS AND SUGAR BEET.—Wonderful milk producers, and yield immense crops. Sow about September-October; in warm climates an autumn sowing will give a fine winter crop. Plant in well worked clean land, in drills thirty inches apart, to allow horse cultivator to work, and when up hoe to remove any growth of weeds, and if necessary, thin out to allow the roots to develop. Five pounds per acre of Mangolds and about eight pounds of Sugar Beet are fair sowings. The best varieties are:—

Yates' Mammoth Long Red.	Golden Tankard
Yates' Champion Yellow Globe	Long Yellow
Sugar Beet Wanzleben	Giant Half Sugar Mangold

SALT BUSH.—The preservation of our Native Salt Bushes has been very much neglected. All they require is protection from stock, so that they may seed themselves, which they do most readily. Salt Bush thrives in dry arid districts, where it is difficult to grow the usual fodder plants. They are easily raised from seed or cuttings. One pound should seed an acre.

KURRAJONG (Sterculia Diversifolia).—Many stock owners have to fall back on anything at all edible for the stock during drought, and as a last resort, the foliage of this tree has considerable value, as well as being very ornamental and enhancing the value of property.

TAGOSTASTE (So called Tree Lucerne).—Suitable for hedges or breakwind and a stand-by against droughts.

Yates

CURRENT PRICE LIST

of Recleaned and Tested FARM SEEDS

CONDITIONS OF SALE AND NON-WARRANTY

We believe that all Seeds, Bulbs, and Roots sold by us are of the description and kind specified by us at the time of sale, but owing to the practical impossibility in many cases of being certain of this, we give no undertaking that such Seeds Bulbs or Roots will correspond with the description under which they are sold, and we make all sales subject to this condition. We further give no warranty, expressed or implied, as to their growth, description, quality or productiveness, and will not be in any way responsible for the crop. If the purchaser does not accept the goods sold to him on these terms, they are at once to be returned to us, and any money paid to us will be refunded.

ARTHUR YATES & CO. LTD.

ARTHUR YATES & Co Ltd

184 & 186 SUSSEX ST SYDNEY

POSTAL ADDRESS, 2707 C., G.P.O.

TELEGRAMS. SEEDSMAN SYDNEY

Yates Recleaned & Tested Farm Seeds

Current Price List

THE PRICES quoted herein are those ruling at this date. Quotations are subject to sales and to market fluctuations. Orders should be accompanied by remittance for the approximate amount of the order, and including freight when goods are required by coastal steamer or by passenger train. Please add exchange to country cheques. Orders sent by goods train are consigned, carriage forward (except to unattached platforms), unless we are otherwise instructed at time of order. We deliver seeds on rail or wharf, Sydney, after which seeds are on customer's account, and at his risk. Grass and Fodder Seeds (except Seed Grain), are invoiced at net weights, and bags charged for. This is to buyer's advantage. Our terms for all Agricultural Seeds are strictly Net Cash. Samples of any lines sent for inspection.

GRASS SEEDS.

NATIVE VARIETIES.

Danthonia (Wallaby Grass)	...	Per lb. 2/8
Mitchell Grass (Astrebla) (to arrive)	...	*
Australian Blue Grass (Andropogon) (to arrive)	...	*
Coolah Grass	...	*
Native Millet	...	*
Flinders Grass	...	*

INTRODUCED VARIETIES

Rye Grass	20 bus.	& over
Perennial—	Per bus.	Per bus

Poverty Bay—This name has been discarded in favour of Yates' Extra Heavy A.Y. Old Pasture which we have selected as the best strain for Australian conditions

Yates Extra Heavy A.Y. Old

Pasture	9/9	9/6
Yates Heavy Re-machined	7/10	7/7
Italian—Yates Heavy Re-machined	6/6	6/3
Westwoldicum Re-machined	6/9	6/6
Wimmera (True)	20/6	19/6
Cocksfoot, Yates Ex. Heavy Re-machined	21/3	20/9
Prairie, Yates Finest Re-machined	10/10	10/3

Per lb. 56 lb. & over Per lb

Rhodes Grass	...	1/7	1/5
Paspalum Dilatatum—	...	1/6	1/5
Yates Prime hand-shaken	...	1/7	1/6
Paspalum Compressum	...	2/3	2/2
Couch (Cynodon dactylon) Choice	...	1/-	11d.
Local Saved	...	...	...
Tall Oat Grass (Avena elatior)	...	...	...
Phalaris Bulbosa, true Perennial variety	...	...	...
per lb.	*	*	*
Awneless Brome Grass (Bromus inermis)	1/11	1/9	1/10
Poa pratensis (Kentucky Blue Grass)	2/-	1/10	1/10
Canadian Blue Grass (Poa compressa)	2/9	...	...
Poa trivialis	1/11	...	...
Poa nemoralis	3/-	...	...
Fescue, Hooker's or Giant	*	...	...
Fescue, Tall	1/9	1/8	...

56 lb. & over Per lb

Fescue, Chewings	...	Per lb. 1/5	1/4
Fescue, Meadow	...	1/10	1/9
Fescue, Fine Leaved (ovina)	...	2/6	*
Agrostis tenuis canina (Brown Top)	...	4/6	4/5
Agrostis vulgaris (Red Top)	...	2/2	*
Agrostis stolonifera (Creeping Bent or Fiorin)	...	2/10	*
Teff Grass	...	1/-	*
Timothy	...	1/-	*
Meadow Foxtail	...	2/9	*
Crested Dogtail	...	8d.	*
Yorkshire Fog	...	8d.	*
Rib Grass, or Lamb's Tongue	...	...	...

Elephant Grass (rooted cuttings)	...	Per 100 10/-	Per 1000 75/-
Kikuyu Grass (roots only)	...	7/6	52/6

CLOVER SEEDS.

28 lbs. Per 100 lbs. & over Per lb.

White, Yates' AY Superfine	Per lb. 1/10	1/9	1/7
Perennial Red or Cow Grass,	...	1/6	1/4
Yates' Superfine	...	9d	8d
Crimson (Trifolium incarnatum)	10d	1/11	1/10
Aisleye	2/-	1/3	1/1
Berseem (Egyptian Clover)	1/4	3/3	3/2
Subterranean Yates' AY	3/4	...	...
Strawberry (Shelled Seed)	...	...	...
very scarce	20/-	*	*
English Yellow Trefoil (Medicago lupulina)	1/-	11d.	*
Lotus corniculatus	2/1	2/-	1/11
Lotus major	2/9	2/8	*
Lotus Angustissimus	2/1	2/-	1/11
Medicago orbicularis (Burless Clover)	...	*	*
Medicago denticulata (Burr or Native Trefoil)	1/6	1/4	*
Shelled Seed	1/4	1/3	1/1
Bokhara (Melilotus alba)	...	...	...

[PLEASE TURN OVER]

APPROXIMATE QUANTITIES TO SOW PER ACRE

And Weight in lbs. of varieties quoted per bushel

Farm Seeds

Sow per acre if
used alone

Danthonia	15 lb.
Mitchell Grass	2 to 3 lb.
Rhodes Grass	4 to 6 lb.
Paspalum Dilitatum	10 lb.
Paspalum Compressum	5 lb.
Couch Grass	10 lb.
Tall Oat Grass	20 to 30 lb.
Phalaris Bulbosa	6 to 8 lb.
Kilkuya Grass	2500 roots
Cocksfoot, 20 lb. bus.	1½ bus.
Prairie Grass 20 lb. bus.	1 to 2 bus.
Awnless Brome Grass	20 to 30 lb.
Rye Grasses, 20 lb. bus.	1½ to 2 bus.
Mixed Grasses, 20 lb. bus.	1 to 1½ bus.
Grasses and Clovers, Mixed	25 to 30 lb.
Clovers, sown alone	8 to 12 lb.
„ sown with grasses	2 to 3 lb.
Subterranean Clover	3 to 4 lb.
Strawberry Clover	from 1 lb.
Lucerne, moist localities, broadcast	12 to 15 lb.
Lucerne, moist localities, drilled	8 to 12 lb.
Lucerne, dry districts	6 to 10 lb.
Cow Peas, drilled	10 lb.
60 lb. bus. broadcast	½ to 1 bus

Sow per acre if
used alone

Soy Beans, drilled	15 lb.
„ 60 lb. bus. broadcast	1 bus.
Velvet Beans, in wide drills	15 lb.
Market Beans, 60 lb. bus.	2 bus.
Peanuts	nuts 30 to 40 lb.
„	shelled seed 10 lb.
Field Peas, 60 lb. bus.	2 bus.
Lupins, 60 lb. bus.	2 bus.
Tares or Vetches, 60 lb. bus.	1 to 2 bus.
Horse or Tick Beans, 60 lb. bus.	2 bus.
Maize, in rows for grain	8 to 12 lb.
Maize, 56 lb. bus., broadcast	1 to 1½ bus.
Sorghum, Broadcast	20 to 30 lb.
„ in drills	10 lb.
Grain Sorghum	4 to 6 lb.
Millet, broadcast	20 lb.
„ in drills	10 lb.
Sudan Grass	8 to 12 lb.
Seed Oats, 40 lb. bus.	2 bus.
Seed Wheat, 60 lb. bus., in drills for grain	¾ to 1 bus.
Seed Wheat, broadcast	1 to 2 bus.
Barley, 50 lb. bus.	2 bus.
Rye Corn, 60 lb. bus.	2 bus.
Sowing Rape	3 to 6 lb.
Sheeps Burnet	10 to 12 lb.
Sunflower, in rows	12 lb.
Artichokes	4 to 6 cwt.

Sow per acre if
used alone

Buckwheat, 50 lb. bus., broadcast	1 bus.
„ in drills	25 lb.
Canary Seed	17 to 20 lb.
Linseed	60 lb.
Cattle Melon	2 lb.
Cattle Pumpkin	1 to 2 lb.
Mustard	8 lb.
Silver Beet	4 lb.
Mangolds	5 lb.
Sugar Beet	8 lb.
Field Carrot	3 lb.
Swede Turnips	2 to 3 lb.
Potatoes	6 to 8 cwt.

Market Garden Crops

Garden Beans, 60 lb. bus.	2 bus.
Cabbage	½ lb.
Cauliflower	½ lb.
Cucumber	½ lb.
Melon, Water	2 lb.
„ Rock	¾ lb.
Onion	3 lb.
Peas, 60 lb. bus.	2 bus.
Pumpkin	2 lb.
Tomatoes	2 oz.
Turnip	2 to 3 lb.

BROADCAST SEED SOWERS

FOR sowing broadcast Lucerne, Clovers, Sudan Grass, Millets, Pasture Grasses, etc., and small areas of Seed Grain, these machines are excellent. We use them on our own farms for sowing Lucerne, Cloves, etc., and we find them of considerable value.

CAHOON BROADCAST SEED SOWER.

A strong well-made machine capable of giving long and satisfactory service. Having filled machine and set gauge as per instructions, commence walking at ordinary pace, giving handle one complete turn each step. This will give a fine even sowing. Price, 35s.



Cahoon Broadcast Seed Sower.

CYCLONE BROADCAST SEED SOWER.

A neat simple machine which has proved very satisfactory in service. The seed is distributed horizontally, the power being obtained by a crank handle very conveniently placed. Price, 26s.

CHICAGO BROADCAST SEED SOWER.

Practical, neat, and mechanically correct in construction. Distributes seed evenly and has an automatic cut off. Accurate measuring device. Price, 26s.

N.B.—No Prices on this and the next page include freight or postage which is extra in all cases,

Yates' Manures and Fertilizers

For Bag Lots or over, write for Quotations

HEAVY and continuous farm crops and good quality flowers and vegetables cannot be grown without manure. Manuring comes next in importance to physical condition of soil, which in turn is dependent on proper drainage, preparation and cultivation of land.

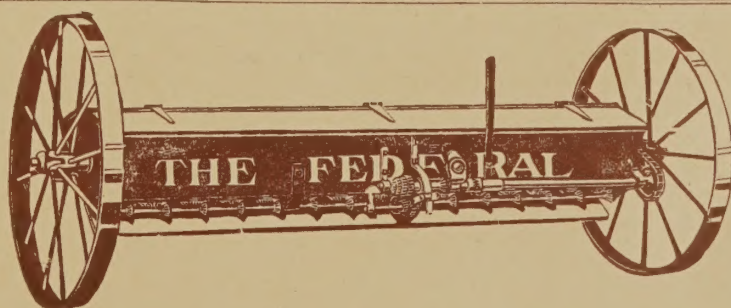
Ordinarily there is nothing to equal stable or farmyard manure, but for farm use it is impossible to obtain in Australia in required quantities. Artificial manures, however, have a very great value, especially if the humus content of the soil is kept up by crop rotation and green manuring. For general purposes superphosphate is an excellent fertilizer, but the following special manures are superior for their respective crops.

MANURES	Ton.	Cwt.	56lbs.	28lbs.	14lbs.	7lbs.
	£ s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Superphosphate	7 10 0	8 0	4 6	2 9	1 6	1 0
Bonedust	10 5 0	11 0	5 6	3 0	1 9	1 0
Blood and Bone	10 5 0	11 0	5 6	3 0	1 9	1 0
Hydrated Lime	11 10 0	12 6	6 3	4 6	2 6	1 6
Sulphate of Ammonia	19 10 0	20 0	10 0	5 6	3 0	1 9
Sulphate of Potash	19 10 0	20 0	10 0	5 6	3 0	1 9
Nitrate of Soda		20 0	10 0	5 6	3 0	1 9
Yates' Plant Food		16 6	8 3	4 3	2 3	1 3
A.Y. Sweet Pea Manure		17 6	8 9	4 6	2 6	1 6
A.Y. Flowers and Shrubs Manure		15 6	8 0	4 3	2 3	1 3
A.Y. Potato and Tomato Manure		16 6	8 6	4 6	2 6	1 6
A.Y. Cabbage and Cauliflower Manure		15 6	8 0	4 3	2 3	1 3
A.Y. Onion Manure		15 6	8 0	4 3	2 3	1 3
A.Y. Pea and Bean Manure		12 0	6 6	3 6	2 0	1 3
A.Y. Pumpkin and Melon Manure		15 6	8 0	4 3	2 3	1 3
A.Y. Lucerne and Clover Manure		12 0	6 6	3 6	2 0	1 3
A.Y. Maize and Green Fodder Manure		15 0	7 9	4 0	2 3	1 3
A.Y. Maize (for Grain) Manure		13 0	6 9	3 6	2 0	1 3
A.Y. Stone Fruit & Strawberry Manure		15 6	8 0	4 3	2 3	1 3
A.Y. Citrus, Passion & Grape Manure		16 6	8 3	4 3	2 3	1 3
A.Y. Special Lawn Manure		16 6	8 3	4 3	2 3	1 3
A.Y. Rape and Root Crop Manure		13 0	6 9	3 6	2 0	1 3
A.Y. Hay and Pasture Manure		13 0	6 9	3 6	2 0	1 3
Powdered Carbonate of Lime, 5s. 6d. bag						

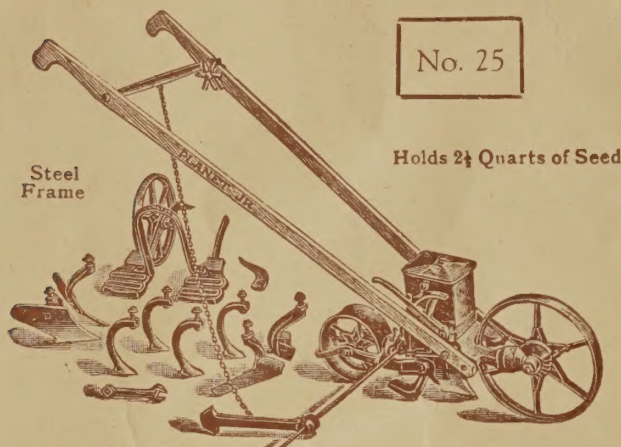
Prices on Application

The "FEDERAL" LIME AND FERTILIZER SPREADER

For enriching pasture lands and cropping areas. Well and strongly made in 6 ft., 9 ft. and 12 ft. sizes, the 9 ft. being the standard size. All particulars on application.



THE intelligent use of these wonderful labor saving implements is a big factor in the successful working of market gardens, orchards, etc. Provided reliable seeds only are sown, regular and accurate planting, followed by consistent cultivation, will do more than anything else to ensure big returns. We therefore offer the following machines with every confidence. They are the strongest and most useful on the market, and have an excellent reputation for design and durability.

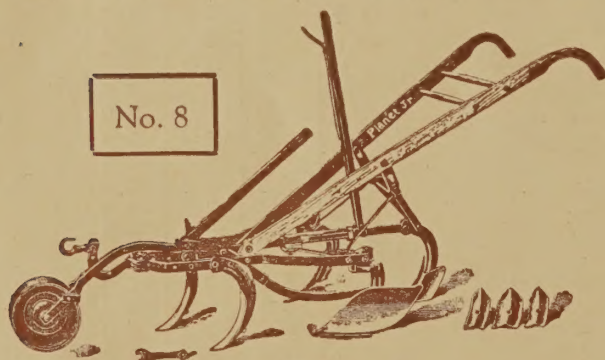


The Combined Hill and Drill Seeder, Double and Single Wheel Hoe, Cultivator and Plow. A most useful tool for all large Gardens. All particulars on application.

PLANET JR. COMBINED HILL AND DRILL SEEDER, DOUBLE AND SINGLE WHEEL HOE CULTIVATOR AND PLOUGH.

An excellent hand machine for either garden or farm. As its name indicates, it is a well designed tool, combining the functions of an efficient seeder for sowing in drills and in hills, a double wheel and a single wheel hoe, a cultivator and garden plough. It will sow almost all varieties of seeds, and this together with its many other uses makes it one of the most useful tools one can have.

Price on Rail or Steamer Sydney. Weight,
packed, about 60 lbs. £5 17 6



No. 8

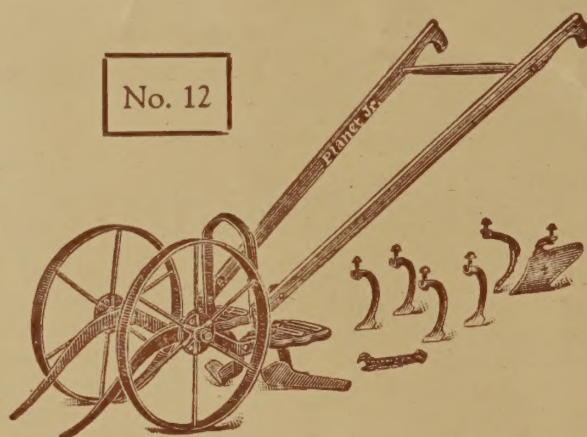
PLANET JR. HORSE HOE AND CULTIVATOR

This horse machine is a general favorite, being complete and easily operated. Believing as we do that the more thorough the cultivation, the more sure the crop, we would like to see at least one of these implements in use on every farm and large market garden. This machine is made almost entirely of steel, well braced and adaptable to any conditions. Frame of stiff steel, extra long and high, closes to 10 inches and opens to 25. Handles adjustable up, down and sidewise.

Cultivator teeth are of high carbon bevelled steel, thereby making them self-sharpening, and the point retain its shape, greatly prolonging the life of the steel. Patent hillers are reversible for hoeing or hilling. Can be run close to the plants without endangering the roots.

We would draw special attention to the depth regulator which operates with the wheel lever. It is an important particular. It controls the depth and steadies the machine, and is adjusted in an instant. The solid steel wheel, having no spokes, does not clog with sticks, stones, or trash.

Price on Rail Steamer Sydney. Weight,
packed, about 84 lbs. £5 2 6



No. 12

PLANET JR. COMBINED DOUBLE AND SINGLE WHEEL HOE, CULTIVATOR AND PLOUGH

A double and single wheel hoe in one, with high arch, so that crops can be straddled until 20 inches high—ensuring quicker and cleaner work. It may then be used between the rows with one or two wheels. Will do almost any kind of garden work—ploughing, harrowing, hoeing, cultivating, opening furrows, covering and hilling, and useful throughout the season. Tools are of special design and specially hardened, giving great satisfaction and long service. The hoes are the most useful attachment and wonderful weed killers. All steel cultivator teeth for deep or shallow work, reversible ploughs for opening or closing furrows, and leaf lifters for late cultivation.

To work effectively the ground must be in a good loose and friable condition. In heavy and badly worked land the use of this implement is not satisfactory.

Price on Rail or Steamer Sydney. Weight,
packed, about 33 lbs. £3 0 0

ARTHUR YATES & Co. Ltd.

“AUSTRALIA'S GREATEST SEED HOUSE”

184-186 SUSSEX ST. SYDNEY.